



Remedial Investigation / Feasibility Study

Progress Report #18
February – April 2018

May 7, 2018

Prepared for:

Columbia Falls Aluminium Company, LLC
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- A. Project Schedule

1. Introduction

This Progress Report (Report) prepared by Roux Environmental Engineering and Geology, D.P.C. (Roux) presents a summary of activities completed during the period of February 2018 through April 2018, on behalf of Columbia Falls Aluminum Company, LLC (CFAC), for the Remedial Investigation / Feasibility Study (RI/FS) being performed at the Anaconda Aluminum Co. Columbia Falls Reduction Plant (a/k/a Columbia Falls Aluminum Plant) generally located near Columbia Falls in Flathead County, Montana ("Site"). The RI/FS is being conducted pursuant to the Administrative Settlement Agreement and Order on Consent (AOC) dated November 30, 2015 between CFAC and the United States Environmental Protection Agency (USEPA) (CERCLA Docket No. 08-2016-0002).

This Report provides a description of the actions that have been taken to comply with the AOC during the reporting period and describes work planned for the upcoming reporting period, including an updated project schedule as Appendix A. This report also provides updates regarding the availability of any new, validated sampling data received by CFAC during the reporting period. Lastly, this Report provides an update on any scope revisions and/or project delays encountered and solutions implemented to address any changes.

2. Work Completed

This Section provides a summary of activities completed or ongoing in February 2018 through April 2018.

2.1 Submittal of the Groundwater and Surface Water Data Summary Report

The results of all four rounds of groundwater and surface water samples collected during the Phase I Site Characterization was included in a Groundwater and Surface Water Data Summary Report (GW/SW Data Summary Report) submitted to USEPA and MDEQ on November 17, 2017. CFAC/Roux received comments on the GW/SW Data Summary Report from USEPA on January 4, 2018, and comments from MDEQ via email on January 15, 2018. USEPA, MDEQ, and CFAC/Roux reviewed the comments during a technical meeting at the Site on January 16 and 17, 2018. CFAC/Roux responses to the comments and a revised GW/SW Data Summary Report were submitted to USEPA and MDEQ on February 9, 2018. CFAC/Roux received additional comments from USEPA via e-mail correspondence on February 28, 2018. Based on the e-mail correspondence, the document was revised to incorporate the additional comments and considered approved by USEPA. CFAC/Roux responses to the additional comments from USEPA and the Final GW/SW Data Summary Report was submitted on March 16, 2018.

2.2 Submittal of Baseline Risk Assessment Work Plans

Roux and their risk assessment subcontractor, EHS Support, LLC (EHS Support) submitted the draft Baseline Human Health Risk Assessment Work Plan (BHHRA WP) and Baseline Ecological Risk Assessment Work Plan (BERA WP) to USEPA/MDEQ on November 17, 2017. CFAC/Roux received comments on the BHHRA WP and BERA WP from USEPA on January 4 and 16, 2018. MDEQ submitted their comments on the BHHRA WP and BERA WP to USEPA on January 9, 2018, and CFAC/Roux received their comments on January 10, 2018.

USEPA, MDEQ, and CFAC/Roux reviewed the comments during a technical meeting at the Site on January 16 and 17, 2018. During the meeting it was determined that CFAC/Roux will submit interim risk assessment deliverables to USEPA/MDEQ for review and comment to provide additional details regarding the risk assessment assumptions and methodology beyond that included in the BHHRA WP and BERA WP.

CFAC/Roux/EHS Support responses to the comments on the BERA WP and BHHRA WP were submitted to USEPA and MDEQ on February 13, 2018. The specific items to be revised in the BERA WP and BHHRA WPs, the items to be included in the interim deliverables, and the schedule for submission were identified in the responses to USEPA/MDEQ comments. Following receipt of the response to comments, USEPA provided approval to finalize the BERA WP and BHHRA WP via email correspondence to Roux on April 17, 2018. The final BERA WP and BHHRA WP will be revised in accordance with the response to comments and submitted during the next reporting period.

The conceptual framework presented in the BHHRA WP and BERA WP were used to support the development of the detailed study design and sampling plan presented in the Phase II Site Characterization Sampling and Analysis Plan (SAP), as described in Section 2.3.

2.3 Preparation of Phase II Sampling and Analysis Plan

The Phase II Site Characterization SAP was prepared by CFAC/Roux to present the scope of work for the next phase of investigation at the Site. The purpose of the Phase II Site Characterization is to supplement the findings from the Phase I Site Characterization and to address the data gaps identified in the BHHRA WP and BERA WP. The data collected as part of the Phase I Site Characterization and the Phase II Site Characterization will be utilized to complete the risk assessment and feasibility study for the Site.

The draft Phase II SAP was submitted to USEPA and MDEQ for review and comment on February 28, 2018. The Phase II SAP consists of a Field Sampling Plan (FSP) that describes the data gathering and sampling activities and associated fieldwork procedures for the Phase II Site Characterization; a Quality Assurance Project Plan (QAPP) that describes the policy, organization, functional activities, and quality assurance (QA) and quality control (QC) protocols necessary to achieve the data quality objectives (DQOs) of the Phase II Site Characterization; and an updated project schedule outlining each phase of work for the Phase II Site Characterization.

CFAC/Roux received initial comments on the draft Phase II SAP from USEPA and MDEQ on April 4, 2018. CFAC/Roux responses to the initial comments on the draft Phase II SAP were submitted to USEPA and MDEQ on April 18, 2018. CFAC/Roux received additional comments from USEPA's risk assessors on April 12, 2018. A conference call was held on April 19, 2018 with USEPA, MDEQ, CFAC, and Roux to discuss the responses. CFAC/Roux documented the discussion and circulated Meeting Minutes to the project team on April 24, 2018. CFAC/Roux responses to the additional comments and responses discussed on the conference call were provided to USEPA on April 25, 2018. The final Phase II SAP will be revised in accordance with the response to comments and submitted during the next reporting period.

On April 20, 2018, the USEPA provided CFAC/Roux interim approval via email to proceed with the Phase II Site Characterization field activities, as agreed upon in the April 19th conference call referenced above, while the Phase II SAP is finalized. The Phase II Site Characterization field work began with Site reconnaissance activities on April 25, 2018 as described in Section 2.6 below.

2.4 South Percolation Ponds Expedited Risk Assessment Activities

As discussed with USEPA and MDEQ via conference call on August 8, 2017, high-water conditions in the Flathead River during 2017 caused significant erosion of the dam on the east side of the South Percolation Ponds. On September 6, 2017, CFAC/Roux submitted a letter to USEPA requesting concurrence to expedite risk assessment activities in the South Percolation Ponds. The purpose of the expedited risk assessment activities is to provide for a better understanding of environmental conditions in the Ponds and any potential human health or ecological risks associated with those conditions.

The proposed path forward described in the letter included, but was not limited to, determination of data gaps, development of a data gap sampling and analysis plan, a summary of field sampling and analysis activities to be completed in October/November 2017, and development of a technical memorandum to summarize the work completed and risk assessment findings. The findings will be incorporated into the Final Baseline Ecological and Human Health Risk Assessments for the Site.

USEPA concurred with the plan to expedite risk assessment activities in the South Percolation Ponds via email correspondence on September 12, 2017. CFAC/Roux submitted an Expedited Risk Assessment Sampling and Analysis Plan (Expedited Risk Assessment SAP) for the South Percolation Ponds to USEPA

on October 23, 2017. The Expedited Risk Assessment SAP discussed the approach to conduct sampling activities and laboratory analysis for locations within and around the South Percolation Ponds. USEPA concurred with the approach outlined in the letter in email correspondence on October 24, 2017.

Roux conducted soil, sediment, and surface water sampling activities in and around the Ponds and Backwater Seep Sampling Area in accordance with the USEPA approved Expedited Risk Assessment SAP in October and November 2017. CFAC also acted in December 2017 to stabilize the dam via installation of additional engineering controls, which was not part of the RI/FS.

The draft sampling results from the Expedited Risk Assessment were provided to the USEPA on March 16, 2018 via email correspondence. The results will continue to be evaluated and will be summarized in a technical memorandum for submission to USEPA following review by CFAC. In addition, the results will be considered during preparation of the interim risk assessment deliverables and incorporated as part of the final BHHRA and BERA for the Site.

2.5 Concrete Sampling and Data Evaluation

CFAC's contractor Calbag Resources, LLC (Calbag) is currently onsite and demolishing the Main Plant building. Calbag continues to demolish potrooms and remove concrete from potroom basements. CFAC is still evaluating their options for concrete removal and potential backfilling. Demolition of potrooms 1 through 10 is estimated to be complete as of November 2018.

2.6 Phase II Site Characterization Field Activities

This section describes the Phase II Site Characterization field activities that were completed during the reporting period of February 2018 through April 2018.

2.6.1 Mobilization and Site Reconnaissance

Roux field personnel mobilized to the Site on April 25, 2018 to start the Phase II Site Characterization field activities. Site reconnaissance activities were initiated by Roux on April 25, 2018, and were completed on Friday, April 27, 2018. During the Site reconnaissance, Roux personnel visited select proposed Phase II drilling locations to evaluate access for drilling equipment and sampling. At each location where reconnaissance was performed, Roux personnel inspected the area, observations were noted, and photographs were collected to help inform the field program.

2.6.2 Site Preparation and Clearing and Grading for Drill Rig Access

Cascade Drilling (drilling subcontractor) mobilized to the Site on April 25, 2018 in advance of the start of drilling activities to complete Site preparation. The Site preparation included set-up of the investigation-derived waste staging areas and staging of drilling equipment and materials. The Site preparation work also included clearing of vegetation and grading of land to allow for access of drill rigs in selected drilling locations observed during Site reconnaissance.

2.6.3 Utility Mark-outs

Shari A. Johnson Engineering & Associates (ground penetrating radar subcontractor) mobilized to the Site on April 26, 2018 in advance of the start of drilling activities to perform utility mark-outs in selected areas where drilling will be completed. The locations requiring utility mark-outs were those suspected of being in the vicinity of potential utilities or other subsurface structures as determined based on the Phase I Site

Characterization, Site reconnaissance observations, and discussions with CFAC personnel. The locations requiring utility mark-outs were generally those around the Main Plant Area near the rectifier yards. No marked utilities were observed to be within the proposed areas for drilling.

2.6.4 Soil Sampling

Roux and Cascade Drilling completed 15 soil borings in April 2018. Soil borings were completed utilizing hand tools, the direct push Geoprobe™ drill rig, and the sonic drill rig. Final boring logs for each soil boring will be included in the Phase II Site Characterization Summary Report. A list of the borings completed and sampling associated with the completion of each boring is provided in Table 1.

In April 2018, 39 soil samples were collected by Roux field personnel from soil boring locations. Sample intervals and selected analyses were in accordance with the Phase II SAP. Table 1 provides a summary of the samples collected.

2.7 Weekly Reporting, Project Conference Calls, and Project Meetings

Project update conference calls were held with USEPA on March 19, 2018 and April 19, 2018 to discuss the Phase II SAP comments and Phase II Site Characterization schedule. Project conference calls will continue to be conducted throughout implementation of the Phase II Site Characterization to discuss project progress and schedule. Additionally, a weekly report was submitted and will continue to be submitted to USEPA during field activities.

A Community Liaison Panel (CLP) / Public Meeting is scheduled to be held on May 9, 2018 at the Site. Representatives from the CLP, USEPA, MDEQ, Glencore, CFAC, Roux, and Ann Green Communications will be present for the meeting. The meeting will include a tour of the CFAC facility to demonstrate demolition progress and will tour the drilling locations and associated monitoring well installation locations being advanced as part of the Phase II Site Characterization. A summary of the CLP / Public Meeting will be documented in the next reporting period.

3. Work Planned for Next Reporting Period

This section summarizes the work planned for the next reporting period of May 2018.

3.1 Baseline Risk Assessment Work Plans

CFAC/Roux/EHS Support will revise the BHHRA WP and BERA WP in accordance with the response to comments described in Section 2.2. CFAC/Roux/EHS Support will submit the Final BHHRA WP and BERA WP to USEPA in May 2018.

3.2 Phase II Sampling and Analysis Plan

CFAC/Roux will revise the Phase II SAP in accordance with the response to comments described in Section 2.3. CFAC/Roux will submit the Final Phase II SAP in May 2018.

As described in the Phase II SAP, Roux is conducting a Background Investigation as part of the Phase II Site Characterization. A soil, sediment, and surface water sampling program will be conducted to characterize the background concentrations of COPCs and COPECs in areas outside the Site that are unaffected by historic Site operations or other readily identifiable anthropogenic sources of contamination.

During the May 2018 reporting period, Roux will conduct reconnaissance of potential background reference areas. A Background Investigation SAP Addendum will be submitted to USEPA documenting proposed reference stations and details regarding background sampling rationale and data quality objectives. The Background SAP Addendum will be submitted to USEPA in the next reporting period(s) prior to the collection of background samples in the high-water season (June 2018).

3.3 South Percolation Ponds Expedited Risk Assessment

The sampling results and findings from the Expedited Risk Assessment will be summarized in a technical memorandum for submission to USEPA following review by CFAC. The results will be incorporated into the BHHRA and BERA for the Site.

3.4 Ongoing Phase II Site Characterization Field Activities

Completion of soil borings, installation of new monitoring wells, and soil sampling activities associated with the Phase II Site Characterization scope of work will continue in May 2018. The drilling and sampling work will continue in accordance with procedures described in the Phase II SAP. The drilling work will continue to be completed by Cascade Drilling with the support of Roux field personnel. Future progress reports will discuss progress of the drilling scope of work, including a review of locations completed, a summary of samples collected, schedule, and any deviations from the Phase II SAP.

During May 2018, Cascade Drilling will develop newly-constructed monitoring wells. Roux field personnel will oversee the development. Field data collected during monitoring well development will be recorded on field datasheets and will be provided in the Phase II Site Characterization Summary Report.

3.5 Concrete Sampling and Data Evaluation

Calbag is currently onsite and demolishing the Main Plant building. Calbag continues to demolish potrooms and remove concrete from potroom basements. CFAC is still evaluating their options for concrete removal and potential backfilling. Demolition of potrooms 1 through 10 is estimated to be complete as of November 2018.

4. Database Updates

No validated data was received from February 2018 through April 2018 for the CFAC RI/FS and therefore no validated data was uploaded to the CFAC RI/FS database by Roux.

Validation of laboratory data from the Phase II Site Characterization will be performed by Laboratory Data Consultants (LDC) as a subcontractor to Roux. Validated data will continue to be imported into the project database and managed in accordance with the data management procedures outlined in Section 7.10 of the Phase II SAP. Future progress reports will discuss updates to the project database.


5. Scope/Schedule Revisions

An updated project schedule is attached to this Progress Report in Appendix A. The schedule was updated to reflect progress based on RI/FS activities completed through April 2018. A schedule for the Phase II Site Characterization was included in the Phase II SAP, and will be provided to USEPA routinely throughout the RI/FS in future progress reports.

On behalf of CFAC, Roux will continue to pursue the overall objectives described in the AOC and the RI/FS Work Plan. Roux will continue to inform the USEPA of completed and upcoming activities pursuant to the requirements of the AOC in future progress reports.

Respectfully submitted,

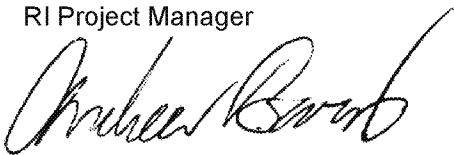
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TABLE

Soil Samples Collected Through April 2018

Table 1. Soil Samples Collected Through April 2018
Phase II Site Characterization, Columbia Falls Aluminum Company, Montana

Location ID	Date Sampled	Surface (0-0.5 ft bls)	Shallow (0.5-2 ft bls)	Deep (5-7 ft bls)	Deep (10-12 ft bls)	Deep (15-17 ft bls)	Deep (17-22 ft bls)	Above Water Table (Interval Varies)	In Screened Interval (Interval Varies)
CFSB-207	4/28/2018	X	X						
CFSB-208	4/28/2018	X	X						
CFSB-231	4/28/2018	X	X						
CFSB-232	4/28/2018	X	X						
CFSB-233	4/28/2018	X	X						
CFSB-234	4/28/2018	X	X						
CFSB-235	4/28/2018	X	X						
CFSB-236	4/28/2018	X	X						
CFSB-254	4/30/2018	X	X		X				
CFSB-255	4/30/2018	X	X		X				
CFSB-256	4/30/2018	X	X		X				
CFSB-257	4/30/2018	X	X		X				
CFSB-258	4/30/2018	X	X		X				
CFSB-259	4/30/2018	X	X		X				
CFMW-066	4/30/2018	X	X		X			X	X

ft bls - Feet Below Land Surface

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APPENDIX A

Project Schedule

CFAC RI/FS Schedule Updated April 30, 2018																													
ID	Deliverable/Task Name	Duration	Start	Finish	Company	Predecessors	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017	April 2017	May 2017	June 2017	July 2017	August 2017	September 2017	October 2017	November 2017
1	AOC is executed by all parties	1 day	Mon 11/30/15	Mon 11/30/15	EPA/CFAC																								
2	Historical Records Review	160 days	Mon 2/8/16	Fri 9/16/16	Roux																								
3	X Draft Health and Safety Plan (HASP)	30 edays	Mon 11/30/15	Wed 12/30/15	Roux	1																							
4	X Final Health and Safety Plan (HASP)	25 days	Thu 12/31/15	Wed 2/3/16	Roux	3																							
5	Site is clear of Snow / Field Work Begins	1 day	Mon 4/4/16	Mon 4/4/16																									
6	Pre-Intrusive Task 1 - Site Reconnaissance	10 days	Mon 4/4/16	Fri 4/15/16	Roux	555																							
7	Pre-Intrusive Task 2 - Geophysical Survey	5 days	Mon 4/18/16	Fri 4/22/16	Roux	6																							
8	Pre-Intrusive Task 3 - Soil Gas Survey	7 days	Mon 4/18/16	Tue 4/26/16	Roux	755																							
9	SAP Addendum	75 days	Mon 4/18/16	Fri 7/29/16	Roux																								
10	X Draft SAP Addendum	40 edays	Mon 4/18/16	Fri 6/10/16	Roux	6																							
11	EPA Review of Draft SAP Addendum	15 days	Mon 6/13/16	Fri 7/1/16	EPA	10																							
12	X Final SAP Addendum	20 days	Mon 7/4/16	Fri 7/29/16	Roux	11																							
13	Source Area Investigation - Phase I Site Characterization Field Activities	120 days	Mon 5/9/16	Fri 10/21/16	Roux/Hydrometrics																								
14	GPR Utility Mark-Outs	5 days	Mon 5/9/16	Fri 5/13/16	Roux																								
15	Clearing / Grading for Drill Rig Access	4 days	Wed 5/11/16	Mon 5/16/16	Roux																								
16	Sonic Rig 1	75 days	Mon 5/16/16	Fri 8/26/16	Roux	8FS+10 days																							
17	Sonic Rig 2	50 days	Mon 5/16/16	Fri 7/22/16	Roux	8FS+10 days																							
18	Geoprobe	20 days	Mon 5/16/16	Fri 6/10/16	Hydrometrics	8FS+10 days																							
19	Landfill GPR Survey Field Work	3 days	Mon 7/25/16	Wed 7/27/16	Roux																								
20	Test Pitting	5 days	Mon 8/15/16	Fri 8/19/16	Roux																								
21	Additional Monitoring Well redevelopment activities	10 days	Mon 10/10/16	Fri 10/21/16	Hydrometrics																								
22	Background Area Investigation	5 days	Mon 6/13/16	Fri 6/17/16	Hydrometrics	18																							
23	Operational Grid Area Investigation	30 days	Mon 6/20/16	Fri 7/29/16	Hydrometrics	22																							
24	Site-Wide Surface Water Sampling - Event 1	5 days	Mon 9/5/16	Fri 9/9/16	Roux/Hydrometrics	16FS+5 days																							
25	Site-Wide Groundwater Sampling - Event 1	15 days	Mon 9/12/16	Fri 9/30/16	Roux/Hydrometrics	24																							
26	Site-Wide Surface Water Sampling - Event 2	5 days	Mon 12/5/16	Fri 12/9/16	Roux/Hydrometrics	24SS+90 edays																							
27	Site-Wide Groundwater Sampling - Event 2	15 days	Mon 12/12/16	Fri 12/30/16	Roux/Hydrometrics	26																							
28	Site-Wide Surface Water Sampling - Event 3	5 days	Mon 3/13/17	Fri 3/17/17	Roux/Hydrometrics	27SS+90 edays																							
29	Site-Wide Groundwater Sampling - Event 3	15 days	Mon 3/20/17	Fri 4/7/17	Roux/Hydrometrics	28																							
30	Site-Wide Surface Water Sampling - Event 4	5 days	Mon 6/12/17	Fri 6/16/17	Roux/Hydrometrics	28SS+90 edays																							
31	Site-Wide Groundwater Sampling - Event 4	15 days	Mon 6/19/17	Fri 7/7/17	Roux/Hydrometrics	30																							
32	Investigation Derived Waste Management/Disposal	390 days	Mon 4/4/16	Fri 9/29/17	Roux	555																							
33	Phase 1 Site Characterization Data Summary Report	251 days	Mon 10/3/16	Mon 9/18/17	Roux																								
34	Data Validation Completion	35 days	Mon 10/3/16	Fri 11/18/16	Data Validator	25																							
35	X Draft Phase I Site Characterization Summary Report to EPA/MDEQ	71 days	Mon 11/21/16	Mon 2/27/17	Roux	34																							
36	EPA review of Draft Phase I Data Summary Report	30 days	Mon 3/6/17	Fri 4/14/17	EPA	35																							
37	X Response to EPA/MDEQ Comments on Draft Phase I Data Summary Report	100 days	Mon 4/17/17	Fri 9/1/17	Roux/EPA	36																							
38	X Final Submission of Phase I Summary Report to EPA/MDEQ	10 days	Tue 9/5/17	Mon 9/18/17	Roux	37																							
39	Screening Level Ecological Risk Assessment (SLERA)	361 days	Mon 5/2/16	Mon 9/18/17	Roux																								
40	Completion of SLERA Field Work	5 days	Mon 5/2/16	Fri 5/6/16	Roux																								
41	X Draft SLERA Summary Report	71 days	Mon 11/21/16	Mon 2/27/17	Roux	34																							
42	EPA review of Draft SLERA Report	30 days	Mon 3/6/17	Fri 4/14/17	EPA	41																							
43	X Response to EPA/MDEQ Comments on Draft SLERA Summary Report	100 days	Mon 4/17/17	Fri 9/1/17	Roux/EPA	42																							
44	X Final Submission of SLERA Report to EPA/MDEQ	10 days	Tue 9/5/17	Mon 9/18/17	Roux	43																							
45	2017 Additional Field Activities	85 days	Mon 4/17/17	Fri 8/11/17	Roux																								
46	Preparation of 2017 field activities plan/SAP Mods	30 days	Mon 4/17/17	Fri 5/26/17	Roux	36																							
47	Pneumatic Slug Testing	15 days	Mon 7/10/17	Fri 7/28/17	Roux	31																							
48	Asbestos Landfill Soil Sampling	10 days	Mon 7/31/17	Fri 8/11/17	Roux/Hydrometrics	47																							
49	Groundwater and Surface Water Sampling Data Summary Report	101 days	Mon 7/10/17	Mon 11/27/17	Roux																								
50	Validation of Round 4 sampling data	25 days	Mon 7/10/17	Fri 8/11/17	Data Validator	31																							
51	X GW/SW Summary Report to EPA/MDEQ	76 days	Mon 8/14/17	Mon 11/27/17	Roux	50																							
52	Baseline Human Health Risk Assessment Work Plan	184 days	Mon 9/18/17	Fri 6/1/18	Roux																								
53	X Draft BHHRA Work Plan to EPA/MDEQ	60 edays	Mon 9/18/17	Fri 11/17/17	Roux/EHS Support	38																							
54	EPA review of Draft BHHRA Work plan	35 days	Mon 11/20/17	Fri 1/5/18	EPA	58																							
55	X Response to EPA/MDEQ Comments on BHHRA Work Plan	70 days	Mon 1/8/18	Fri 4/13/18	Roux	54																							
56	X Final Submission of BHHRA WP to EPA/MDEQ	35 days	Mon 4/16/18	Fri 6/1/18	Roux	55																							
57	Baseline Ecological Risk Assessment Work Plan	184 days	Mon 9/18/17	Fri 6/1/18	Roux																								
58	X Draft BERA Work Plan to EPA/MDEQ	60 edays	Mon 9/18/17	Fri 11/17/17	Roux/EHS Support	44																							
59	EPA review of Draft BERA Work Plan	35 days	Mon 11/20/17	Fri 1/5/18	EPA	58																							
60	X Response to EPA/MDEQ Comments on BERA Work Plan	70 days	Mon 1/8/18	Fri 4/13/18	Roux	59																							
61	X Final Submission BERA Work Plan to EPA/MDEQ	35 days	Mon 4/16/18	Fri 6/1/18	Roux	60																							
62	Phase II Remedial Investigation Sampling and Analysis Plan	117 days	Tue 11/28/17	Wed 5/9/18	Roux																								
63	X Draft Phase II Sampling and Analysis Plan to EPA/MDEQ	67 days	Tue 11/28/17	Wed 2/28/18	Roux	51																							
64	EPA review of draft Phase II Sampling and Analysis Plan	25 days	Thu 3/1/18	Wed 4/4/18	EPA	63																							
65	X Response to EPA/MDEQ Comments on Phase II Sampling and Analysis Plan	15 days	Thu 4/5/18	Wed 4/25/18	Roux	64																							
66	X Final Phase II Sampling and Analysis Plan	10 days	Thu 4/26/18	Wed 5/9/18	Roux	65																							
67	South Percolation Pond Expedited Risk Assessment	115 days	Mon 10/30/17	Fri 4/6/18																									
68	South Percolation Pond Risk Expedited Risk Assessment Field Activities	10 days	Mon 10/30/17	Fri 11/10/17	Roux																								
69	Validation of South Pond Data	25 days	Mon 11/13/17	Fri 12/15/17	Data Validator	68																							
70	Completion of South Pond Risk Assessment Tech Memo	80 days	Mon 12/18/17	Fri 4/6/18	Roux/EHS Support	69																							
71	Phase II Remedial Investigation	131 days	Wed 4/25/18	Tue 10/23/18																									
72	Site Reconnaissance	3 days	Wed 4/25/18	Fri 4/27/18																									

CFAC RI/FS Schedule Updated April 30, 2018																													
ID	Deliverable/Task Name	Duration	Start	Finish	Company	Predecessors	November 2017	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019
1	AOC is executed by all parties	1 day	Mon 11/30/15	Mon 11/30/15	EPA/CFAC																								
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3	X Draft Health and Safety Plan (HASP)	30 edays	Mon 11/30/15	Wed 12/30/15	Roux	1																							
4	X Final Health and Safety Plan (HASP)	25 days	Thu 12/31/15	Wed 2/3/16	Roux	3																							
5	Site is clear of Snow / Field Work Begins	1 day	Mon 4/4/16	Mon 4/4/16																									
6	Pre-Intrusive Task 1 - Site Reconnaissance	10 days	Mon 4/4/16	Fri 4/15/16	Roux	555																							
7	Pre-Intrusive Task 2 - Geophysical Survey	5 days	Mon 4/18/16	Fri 4/22/16	Roux	6																							
8	Pre-Intrusive Task 3 - Soil Gas Survey	7 days	Mon 4/18/16	Tue 4/26/16	Roux	755																							
9	SAP Addendum	75 days	Mon 4/18/16	Fri 7/29/16	Roux																								
10	X Draft SAP Addendum	40 edays	Mon 4/18/16	Fri 6/10/16	Roux	6																							
11	EPA Review of Draft SAP Addendum	15 days	Mon 6/13/16	Fri 7/1/16	EPA	10																							
12	X Final SAP Addendum	20 days	Mon 7/4/16	Fri 7/29/16	Roux	11																							
13	Source Area Investigation - Phase I Site Characterization Field Activities	120 days	Mon 5/9/16	Fri 10/21/16	Roux/Hydrometrics																								
14	GPR Utility Mark-Outs	5 days	Mon 5/9/16	Fri 5/13/16	Roux																								
15	Clearing / Grading for Drill Rig Access	4 days	Wed 5/11/16	Mon 5/16/16	Roux																								
16	Sonic Rig 1	75 days	Mon 5/16/16	Fri 8/26/16	Roux	8FS+10 days																							
17	Sonic Rig 2	50 days	Mon 5/16/16	Fri 7/22/16	Roux	8FS+10 days																							
18	Geoprobe	20 days	Mon 5/16/16	Fri 6/10/16	Hydrometrics	8FS+10 days																							
19	Landfill GPR Survey Field Work	3 days	Mon 7/25/16	Wed 7/27/16	Roux																								
20	Test Pitting	5 days	Mon 8/15/16	Fri 8/19/16	Roux																								
21	Additional Monitoring Well redevelopment activities	10 days	Mon 10/10/16	Fri 10/21/16	Hydrometrics																								
22	Background Area Investigation	5 days	Mon 6/13/16	Fri 6/17/16	Hydrometrics	18																							
23	Operational Grid Area Investigation	30 days	Mon 6/20/16	Fri 7/29/16	Hydrometrics	22																							
24	Site-Wide Surface Water Sampling - Event 1	5 days	Mon 9/5/16	Fri 9/9/16	Roux/Hydrometrics	16FS+5 days																							
25	Site-Wide Groundwater Sampling - Event 1	15 days	Mon 9/12/16	Fri 9/30/16	Roux/Hydrometrics	24																							
26	Site-Wide Surface Water Sampling - Event 2	5 days	Mon 12/5/16	Fri 12/9/16	Roux/Hydrometrics	24SS+90 edays																							
27	Site-Wide Groundwater Sampling - Event 2	15 days	Mon 12/12/16	Fri 12/30/16	Roux/Hydrometrics	26																							
28	Site-Wide Surface Water Sampling - Event 3	5 days	Mon 3/13/17	Fri 3/17/17	Roux/Hydrometrics	27SS+90 edays																							
29	Site-Wide Groundwater Sampling - Event 3	15 days	Mon 3/20/17	Fri 4/7/17	Roux/Hydrometrics	28																							
30	Site-Wide Surface Water Sampling - Event 4	5 days	Mon 6/12/17	Fri 6/16/17	Roux/Hydrometrics	28SS+90 edays																							
31	Site-Wide Groundwater Sampling - Event 4	15 days	Mon 6/19/17	Fri 7/7/17	Roux/Hydrometrics	30																							
32	Investigation Derived Waste Management/Disposal	390 days	Mon 4/4/16	Fri 9/29/17	Roux	555																							
33	Phase 1 Site Characterization Data Summary Report	251 days	Mon 10/3/16	Mon 9/18/17	Roux																								
34	Data Validation Completion	35 days	Mon 10/3/16	Fri 11/18/16	Data Validator	25																							
35	X Draft Phase I Site Characterization Summary Report to EPA/MDEQ	71 days	Mon 11/21/16	Mon 2/27/17	Roux	34																							
36	EPA review of Draft Phase I Data Summary Report	30 days	Mon 3/6/17	Fri 4/14/17	EPA	35																							
37	X Response to EPA/MDEQ Comments on Draft Phase I Data Summary Report	100 days	Mon 4/17/17	Fri 9/1/17	Roux/EPA	36																							
38	X Final Submission of Phase I Summary Report to EPA/MDEQ	10 days	Tue 9/5/17	Mon 9/18/17	Roux	37																							
39	Screening Level Ecological Risk Assessment (SLERA)	361 days	Mon 5/2/16	Mon 9/18/17	Roux																								
40	Completion of SLERA Field Work	5 days	Mon 5/2/16	Fri 5/6/16	Roux																								
41	X Draft SLERA Summary Report	71 days	Mon 11/21/16	Mon 2/27/17	Roux	34																							
42	EPA review of Draft SLERA Report	30 days	Mon 3/6/17	Fri 4/14/17	EPA	41																							
43	X Response to EPA/MDEQ Comments on Draft SLERA Summary Report	100 days	Mon 4/17/17	Fri 9/1/17	Roux/EPA	42																							
44	X Final Submission of SLERA Report to EPA/MDEQ	10 days	Tue 9/5/17	Mon 9/18/17	Roux	43																							
45	2017 Additional Field Activities	85 days	Mon 4/17/17	Fri 8/11/17	Roux																								
46	Preparation of 2017 field activities plan/SAP Mods	30 days	Mon 4/17/17	Fri 5/26/17	Roux	36																							
47	Pneumatic Slug Testing	15 days	Mon 7/10/17	Fri 7/28/17	Roux	31																							
48	Asbestos Landfill Soil Sampling	10 days	Mon 7/31/17	Fri 8/11/17	Roux/Hydrometrics	47																							
49	Groundwater and Surface Water Sampling Data Summary Report	101 days	Mon 7/10/17	Mon 11/27/17	Roux																								
50	Validation of Round 4 sampling data	25 days	Mon 7/10/17	Fri 8/11/17	Data Validator	31																							
51	X GW/SW Summary Report to EPA/MDEQ	76 days	Mon 8/14/17	Mon 11/27/17	Roux	50																							
52	Baseline Human Health Risk Assessment Work Plan	184 days	Mon 9/18/17	Fri 6/1/18	Roux																								
53	X Draft BHHRA Work Plan to EPA/MDEQ	60 edays	Mon 9/18/17	Fri 11/17/17	Roux/EHS Support	38																							
54	EPA review of Draft BHHRA Work plan	35 days	Mon 11/20/17	Fri 1/5/18	EPA	58																							
55	X Response to EPA/MDEQ Comments on BHHRA Work Plan	70 days	Mon 1/8/18	Fri 4/13/18	Roux	54																							
56	X Final Submission of BHHRA WP to EPA/MDEQ	35 days	Mon 4/16/18	Fri 6/1/18	Roux	55																							
57	Baseline Ecological Risk Assessment Work Plan	184 days	Mon 9/18/17	Fri 6/1/18	Roux																								
58	X Draft BERA Work Plan to EPA/MDEQ	60 edays	Mon 9/18/17	Fri 11/17/17	Roux/EHS Support	44																							
59	EPA review of Draft BERA Work Plan	35 days	Mon 11/20/17	Fri 1/5/18	EPA	58																							
60	X Response to EPA/MDEQ Comments on BERA Work Plan	70 days	Mon 1/8/18	Fri 4/13/18	Roux	59																							
61	X Final Submission BERA Work Plan to EPA/MDEQ	35 days	Mon 4/16/18	Fri 6/1/18	Roux	60																							
62	Phase II Remedial Investigation Sampling and Analysis Plan	117 days	Tue 11/28/17	Wed 5/9/18	Roux																								
63	X Draft Phase II Sampling and Analysis Plan to EPA/MDEQ	67 days	Tue 11/28/17	Wed 2/28/18	Roux	51																							
64	EPA review of draft Phase II Sampling and Analysis Plan	25 days	Thu 3/1/18	Wed 4/4/18	EPA	63																							
65	X Response to EPA/MDEQ Comments on Phase II Sampling and Analysis Plan	15 days	Thu 4/5/18	Wed 4/25/18	Roux	64																							
66	X Final Phase II Sampling and Analysis Plan	10 days	Thu 4/26/18	Wed 5/9/18	Roux	65																							
67	South Percolation Pond Expedited Risk Assessment	115 days	Mon 10/30/17	Fri 4/6/18																									
68	South Percolation Pond Risk Expedited Risk Assessment Field Activities	10 days	Mon 10/30/17	Fri 11/10/17	Roux																								
69	Validation of South Pond Data	25 days	Mon 11/13/17	Fri 12/15/17	Data Validator	68																							
70	Completion of South Pond Risk Assessment Tech Memo	80 days	Mon 12/18/17	Fri 4/6/18	Roux/EHS Support	69																							
71	Phase II Remedial Investigation	131 days	Wed 4/25/18	Tue 10/23/18																									
72	Site Reconnaissance	3 days	Wed 4/25/18	Fri 4/2																									